

Application. No. 09/977,137
Amendment dated September 16, 2003
Reply to Office Action of June 17, 2003

REMARKS

Claims 1, 2, 5-7, 9-10, 12 and 14 have been amended to better claim the invention in accordance with the suggestion of the Examiner. With the incorporation of the limitations of claims 3 and 4 into claims 1, 9, 10 and 15, claims 3, 4, 8, 11, 13 and 15 have been canceled without prejudice. Claims 9, 10 and 15 (withdrawn) have been amended to introduce the same limitations on chelon sequence as incorporated within claim 1. New claim 17 has been presented. The amendment to recite amino acids 1 to 108 of SEQ ID NO:6 is supported by Table 2, page 22. None of the amendments made herein constitutes the addition of new matter.

The Supplemental Information Disclosure Statement

Applicants respectfully request consideration of the Supplemental Information Disclosure Statement (with 5 references) which was filed by Express Mail on January 17, 2003. Applicants respectfully request that the Examiner telephone for a replacement copy if the Patent Office copy cannot be located.

The Requirement for Restriction

The Examiner has made the requirement for restriction final. Applicants will cancel claims, if necessary, when this application is otherwise in condition for allowance. Claims 9, 10 and 15 (withdrawn) have been amended to introduce the same limitations on chelon sequence as incorporated within claim 1; accordingly, Applicants respectfully request rejoinder and allowance of the claims. All the claims are of the same scope.

The Objections to the Claims

The Examiner has suggested certain changes in the wording of the claims.

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Accordingly, Applicants have amended claims 1 and 2 to refer to nucleotide sequences. Claims 5 and 6 have been amended to recite "with" rather than to contain, claim 7 has been amended to delete "which is", and claim 9 has been amended to recite chelon protein as requested by the Examiner. Applicants appreciate the Examiner's helpful suggestions.

The Rejection under 35 U.S.C. 112, second paragraph

Claim 9 has been rejected under 35 U.S.C. 112, second paragraph, as allegedly indefinite.

The Patent Office has alleged that claim 9 is indefinite in the recitation of "infecting or transforming." The Examiner has alleged that the meaning of infecting is open to interpretation and that it is not interchangeable with transforming.

Without acquiescing to the rejection and in the interest of advancing prosecution, Applicants have amended claim 9 to recite only transforming. In order to elucidate the intended breadth of "transforming," Applicants note that the definition of transforming on pages 7-8, bridging paragraph, encompasses all methods of introducing exogenous DNA, into a (recombinant) host cell. In addition, vectors are defined so as to include plasmid vectors as well as phage vectors.

Applicants respectfully request the withdrawal of the rejection under 112, second paragraph, in view of the amendment to claim 9 and the definitions provided in the as-filed Specification.

The Rejection under 35 U.S.C. 112, first paragraph

Claims 1, 3, 5-6 and 9 have been rejected under 35 U.S.C. 112, first paragraph. Applicants respectfully traverse this rejection.

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The Patent Office has acknowledged that the Specification is enabling for DNA molecules encoding synthetic proteins comprising the sequences of SEQ ID NO:4-12, host cells and methods of recombinant production, but it has been alleged that the Specification does not reasonably provide enablement for a DNA recombinant molecule comprising a sequence encoding any chelon protein that binds mercury ions and host cells. It is further alleged that the claims encompass any and all sequences that encode artificial proteins that bind mercuric ions.

The Patent Office has further alleged that there is insufficient written description in the Specification for nonexemplified chelon proteins.

In the interest of advancing prosecution and without acquiescing to the rejection, claim 1 has been amended to recite the specifically exemplified amino acid sequences of chelon proteins. Claims 3 and 4 are canceled as redundant over amended claim 1. Claims 9, 10 and 15 (withdrawn from consideration) have been similarly amended. Rejoinder has been requested as the independent claims are of the same scope as claim 4, which was identified as containing allowable subject matter.

Claim 9 has been rejected for the recitation of "infecting." As noted above, claim 9 has been amended to delete the recitation of "infecting." As stated in the definition of transforming at pages 7-8, all methods of introducing exogenous DNA into a host cell are intended to be within the scope of "transforming."

Applicants respectfully submit that the amendments to the claims resolve the rejections, and the withdrawal of the rejections under 35 U.S.C. 112, second paragraph, is respectfully requested.

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The Allowable Subject Matter

The Patent Office has identified claim 4 as allowable if rewritten in independent form including all of the limitations of base and intervening claims.

Applicants have incorporated the limitations of claim 4 into claim 1 and have canceled claim 4. It is believed that the application is now in condition for allowance. Other independent claims have been amended to recite the specifically exemplified sequences for chelon proteins.

Conclusion

In view of the foregoing, it is submitted that this case is in condition for allowance, and passage to issuance is respectfully requested.

If there are any outstanding issues related to patentability, the courtesy of a telephone interview is requested, and the Examiner is invited to call to arrange a mutually convenient time.

It is believed that this amendment does not necessitate the payment of any fees under 37 C.F.R. 1.16-1.17. If this is incorrect, however, please charge any fee due under the foregoing Rules to Deposit Account No. 07-1969.

Respectfully submitted,



Donna M. Ferber
Reg. No. 33,878

GREENLEE, WINNER AND SULLIVAN, P.C.
5370 Manhattan Circle, Suite 201
Boulder, CO 80303
Telephone (303) 499-8080
Facsimile: (303) 499-8089
Email: winner@greenwin.com
bnk:

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